



Junior Refuge Manager



Minnesota Valley National Wildlife Refuge and
Wetland Management District



Name _____

Earning Your Junior Refuge Manager Badge

To earn your badge and certificate, complete all the activities required for your age class. When you have completed all the requirements to become a Junior Refuge Manager, bring your completed booklet to either the Bloomington Education and Visitor Center or the Rapids Lake Education and Visitor Center at Minnesota Valley National Wildlife Refuge. A staff member will review the booklet with you and award you a certificate and badge.

Age Classes

The symbol is located in the bottom center of each page to tell you what age(s) the activity is best suited for.



Thirteen-lined Ground Squirrel (ages 5-7): Complete at least 4 of the 10 activities.



Cottonwood (ages 8-10): Complete at least 6 of the 10 activities.



Great Blue Heron (ages 11+): Complete at least 8 of the 10 activities.

Remember...

- Take an adult with you as you do these activities.
- Move slowly and quietly. You'll have a better chance to see wildlife.
- Be careful! Some plants are poisonous.



Become a Junior Refuge Manager

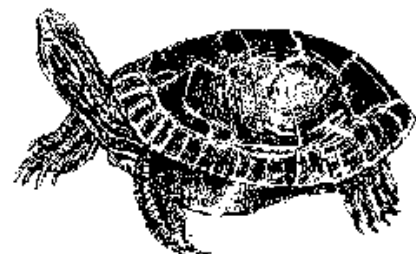
Minnesota Valley National Wildlife Refuge (NWR) and Wetland Management District (WMD) is one of more than 550 refuges in the National Wildlife Refuge System, the most extensive network of lands and waters in the world that is set aside specifically for fish, wildlife, and plants. President Theodore Roosevelt designated the first national wildlife refuge; a tiny sanctuary in the State of Florida called Pelican Island, in 1903. Since then, the refuge system has expanded to include a refuge in every state that range in size from half of an acre to millions of acres!

Minnesota Valley NWR and WMD is a network of lands (14,000+ acres) stretching over 70 river miles of the Minnesota River. Each area of land is called a Unit. You may work on this program on any Unit that is accessible to public.
























Throughout your travels on the Refuge, please remember to follow all Refuge rules. These can be found at all trailhead kiosks or online at www.fws.gov/midwest/minnesotavalley. Please participate in Leave No Trace practices which include the following guidelines:

- Plan ahead and prepare: Check at the visitor center or on the website for notices of any problems you might find while on the refuge.
- Travel on durable surfaces: Stay on the trails.
- Dispose of waste properly: Take out what you brought in.
- Leave what you find: Take only pictures, and leave only footprints.
- Respect wildlife: Remember you're visiting their home! Please do not feed or touch them and try to keep your distance.
- Be considerate of other visitors you may encounter: Everyone has a right to enjoy the Refuge.

Role of Adults: This is a family activity. Please allow the child to answer the questions in their own words. After a child completes an activity, an adult should review the activity with the child. The adult should then initial the box on the checklist for each activity the child completes to receive credit.



Check List

Activity	Age Level			Page Number	Adult's Initials
	5-7	8-10	11+		
Refuge Interpretive Program				5-6	
Habitat Detective				7	
The River Runs Through It				8	
Forest Scavenger Hunt				9	
Bird Watching				10	
Running a Refuge				11	
Wonders of Wetlands				12	
Prairie Discovery				13-14	
Nature Notes				15	
Watch for the Blue Goose				16	

Refuge Interpretative Program

Minnesota Valley National Wildlife Refuge and Wetland Management District is full of interesting things. Ideally, we'd love for everyone to be able to see everything there is to see on the Refuge. However, you need more than a day! Luckily, the Refuge has other ways the public can learn about it without having to spend a lot of time.

For this activity, you need to attend a Refuge presentation, watch a Refuge video, or explore either visitor center. Finish the sentences below for the activity you chose. You may ask the person at the information desk if you need help.

Presentation

I attended a presentation and the topic was

The speaker's name was _____

One interesting thing I learned about the Refuge was

One interesting thing I learned about the topic was

Refuge Video

I watched a video and the name of it was



One interesting thing I learned about the Refuge or the National Wildlife Refuge System was

One interesting thing I learned about from the video was

Visitor Center

I explored the Bloomington / Rapids Lake Education and Visitor Center and one interesting thing I learned about the Refuge was

One other interesting thing I learned was



Habitat Detective

Refuge managers manage habitat, an area that consists of enough food, water, shelter, and living space for a plant or animal.

Minnesota Valley NWR and WMD has three main types of habitat: prairie, forest, and wetland. Choose one of the habitats to investigate and begin your fact finding mission by answering the questions below.



1. Describe what the habitat looks like. What kinds of plants are present? (Trees, grasses, bushes, wildflowers) Name or draw any animals you see or hear.
2. What would the animals in this habitat eat?
3. Where do the animals in this habitat seek shelter?
4. Determine if there is enough space for all the animals in this habitat to live. (Note: Some animals gather in large groups and may appear cramped. In this case, does the group have enough space to move?)



The River Runs Through It

Moving rivers of ice, called glaciers once carved this land. When the glaciers melted, they left behind distinct patterns creating the landscape we see today. Within the visitor centers there are several places where you can find information about the Minnesota River. Answer the questions below by searching through the information in either visitor center.

1. What forces of the Minnesota River help create the habitats (wetlands, grasslands, and forests) for wildlife?
2. Thousands of migratory birds use the Minnesota River as a place to rest and eat. The Minnesota River is located in what flyway?
3. Name at least 5 animals that can be found on the Refuge.
4. Name at least three plants that can be found on the Refuge.
5. What recreational activities can people do on the Refuge?



Forest Scavenger Hunt

Search one of the forest types on the Refuge: hardwood or floodplain. Place a check next to each item found.

☐ Acorns

Turkeys, squirrels, and many birds feed on acorns.

☐ Scat

Scat is another word for animal droppings. What animal do you think this scat is from? Draw it!

☐ A piece of litter

Pick it up and throw it away either back inside the visitor center or at your home. THANK YOU for keeping YOUR National Wildlife Refuge clean!

☐ An insect

Insects are an important part of the food chain and are the most common kind of animals found on the Refuge.

☐ A leaf

Hardwood trees loose their leaves in the fall. These trees are called deciduous trees.

☐ A Bird Singing

Birds sing to find mates, defend their territory, and find friends. Can you think of words to go along with the bird's song? For example, the white-breasted nuthatch, a songbird that walks down trees head first, says "Yank, yank."

☐ Lichens

Lichens are part fungus and part algae. They can be found growing on rocks and sides of trees. Their presence shows a healthy habitat and clean air.

☐ A hole in a tree

The hole is possibly from a woodpecker. We have five different woodpeckers: Downy, Hairy, Red-bellied, Redheaded, and Pileated.

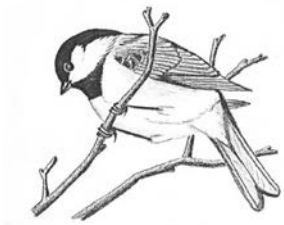


Bird Watching

Bird watching is a popular recreational activity on the Refuge. Depending on the season you may spot colorful migratory songbirds, hardy year-round natives, and even those who occasionally venture out from deep hiding.

Grab a pair of binoculars from the information desk at either Visitor center and head outside on the trails or sit by the feeders to bird watch.

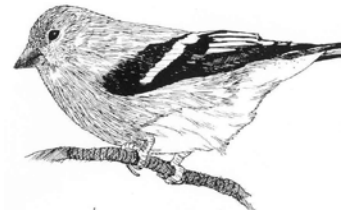
Common birds found at Minnesota Valley NWR and WMD:



Black-capped Chickadee



Blue Jay



American Goldfinch



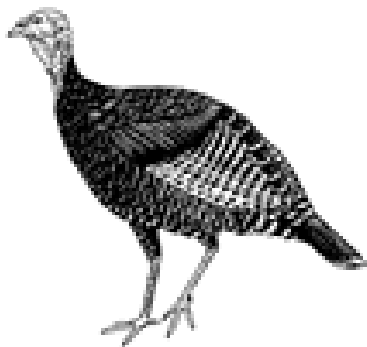
Northern Cardinal



White-breasted Nuthatch



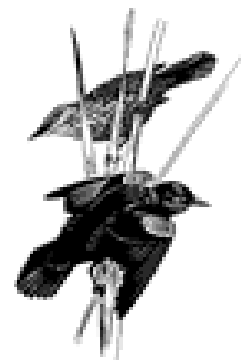
Ruby-throated Hummingbird



Wild Turkey



Downy Woodpecker



Red-winged Blackbird



Running a Refuge

Managing a National Wildlife Refuge takes a lot of work. Refuge staff is knowledgeable in a variety of subjects to help wildlife and the public. Would you like to work at a National Wildlife Refuge? You may become a biologist, a park ranger, or even a refuge manager. First, you must learn about wildlife, their habitat, and how to protect them. Start today by completing this booklet, respecting wildlife, and helping to keep the environment clean.

Write down at least 3 ways the Refuge is helping wildlife and their habitat that you have seen, read, or learned while visiting.

Why does Minnesota Valley National Wildlife Refuge and Wetland Management District manage for wildlife and people?

Think of some things that can hurt wildlife and the environment. Write down what you can do to stop it.

Minnesota Valley NWR and WMD has some unique spots for you to enjoy. Make sure you visit some of these special places while completing this program.

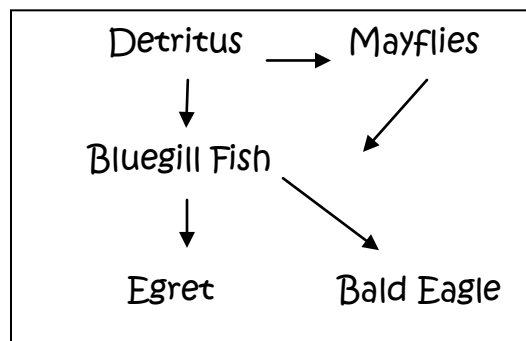


Wonders of Wetlands



Cattails might be the first plant that comes to mind when you hear the word wetland. However, wetlands are home to more than a hundred different kinds of plants. All these plants are the building blocks of the wetland food web, providing food for wetland critters. Though, most wetland animals, such as insects and fish, cannot digest the tough plant material. When plants die, bacteria break down the dead leaves and stems through a process known as decomposition. The left over decomposed matter is then available to animals in a form they can eat. Decomposed plants along with tiny bits of animal remains are called detritus. Fish, mussels, clams, and many other animals feed on detritus. In turn, they eventually become food for other animals (larger fish, mink, egrets) and the food web continues.

Make a wetland food web. Begin with detritus and connect it to an animal that feed on detritus. More than one animal can feed on the same thing. See the example below.



Prairie Discovery

Explore the prairies throughout the Refuge. The Rapids Lake Unit is an excellent spot.

In the prairie, grasses and wildflowers are the plants that live in this habitat. Some grasses, like Indian Grass, will grow taller than you! Mice and voles eat the seeds of the grasses and flowers, pocket gophers eat the roots, and coyotes eat the gophers.

Oak Savanna is a prairie habitat which contains oak trees scattered among grassland. The trees provide nesting places for birds and shade for plants that don't grow well in full sunlight.



Bur Oak

All plants have special features called adaptations to help them survive in what can be a very harsh environment. Waxy, hairy leaves help retain water. Deep roots enable the plant to grow after a fire or during a drought.



Big Bluestem

Find a plant you really like in the prairie. Look at it as though you've never seen it before! Use the eye of a photographer to take "pictures" in your mind of the parts of the plant. Use an artist's eye to see colors, shapes, and textures. Use an ant's view to examine the leaves, flowers, or seeds. Step back to see the plant sway in the wind.



Blazing Star





Draw your plant. Remember do not pick or collect any plants. They provide homes for wildlife!



Nature Notes

Nature notes also known as nature journaling, is a great way to record the world around you. Many scientists use a notebook to track when migrating animals arrive, the first tree to leaf out, and what season certain plants are flowering. Take some time while you're out on the Refuge to find a place that you like and make some observations about nature.

Date _____ Weather Conditions _____

Refuge Unit _____ Location on Unit _____

What does your site look like? (Are there many trees? Are there flowers blooming? Are you near the Minnesota River?)

Do you see or hear any animals? Draw a picture or write a description of what you see and hear.

What plants do you see? Do they have flowers? If so, what is the color and shape? Where are they found (in the shade, in the sun, in water, or on land)?

Activity Extension: Come back to the same spot again later and record your observations. Tracking changes in a specific location over time can help scientists predict when seasonal changes should occur and prevent situations that might be harmful to wildlife populations.



Watch for the Blue Goose

Each national wildlife refuge is identified by a posted sign with the emblem of a “blue” goose. It was designed by J.N. “Ding” Darling and has become the symbol of the National Wildlife Refuge System.



"Whenever you meet this sign, respect it. It means that the land behind the sign has been dedicated by the American people to preserving, for themselves and their children, as much of our native wildlife as can be retained along with modern civilization." -Rachel Carson

Look for signs with the Blue Goose, like the one above, as you hike throughout the Refuge. How many signs did you see while hiking the Refuge?

Refuge staff sometimes comes across signs that need to be replaced. Were any of the signs you saw needed replacing? If so, please write down, in as much detail as possible, where the sign is located in order for us to replace the sign. THANK YOU for helping YOUR National Wildlife Refuge!

